

SEQUENCE LISTING

<110> The Scripps Research Institute
 Zhang, zhiwen
 Alfonta, Lital
 Schultz, Peter

<120> SELECTIVE INCORPORATION OF 5-HYDROXYTRYPTOPHAN INTO PROTEINS IN MAMMALIAN CELLS

<130> 54A-001020PC

<160> 7

<170> PatentIn version 3.2

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<212> DNA
<213> Artificial

<220>
<223> encodes val144Pro mutant of *Bacillus subtilis* tryptophanyl-tRNA synthetase

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 35 40 45

Pro Gln Asp Arg Leu Glu Leu Arg Lys Asn Ile Arg Asn Leu Ala Ala
 50 55 60

Leu Tyr Leu Ala Val Gly Leu Asp Pro Glu Lys Ala Thr Leu phe Ile
 65 70 75 80

Gln Ser Glu Val Pro Ala His Ala Gln Ala Gly Trp Met Met Gln cys
 85 90 95

Val Ala Tyr Ile Gly Glu Leu Glu Arg Met Thr Gln Phe Lys Asp Lys
 100 105 110

Ser Lys Gly Asn Glu Ala Val Val Ser Gly Leu Leu Thr Tyr Pro Pro
 115 120 125

Leu Met Ala Ala Asp Ile Leu Leu Tyr Gly Thr Asp Leu Val Pro Pro
 130 135 140

Gly Glu Asp Gin Lys Gln His Leu Glu Leu Thr Arg Asn Leu Ala Glu
 145 150 155 160

Arg Phe Asn Lys Lys Tyr Asn Asp Ile Phe Thr Ile Pro Glu Val Lys
 165 170 175

Ile Pro Lys Val Gly Ala Arg Ile Met ser Leu Asn Asp Pro Leu Lys
 180 185 190

Lys Met ser Lys ser Asp Pro Asn Gln Lys Ala Tyr Ile Thr Leu Leu
 195 200 205

Asp Glu Pro Lys Gin Leu Glu Lys Lys Ile Lys Ser Ala Val Thr Asp
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Ser Glu Gly Ile val Lys Phe Asp Lys Glu Asn Lys Pro Gly Val Ser
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Asn Leu Leu Thr Ile Tyr ser Ile Leu Gly Asn Thr Thr Ile Glu Glu
 245 250 255

Leu Glu Ala Lys Tyr Glu Gly Lys Gly Tyr Gly Glu Phe Lys Gly Asp
 260 265 270

Leu Ala Glu Val Val Val Asn Ala Leu Lys Pro Ile Gin Asp Arg Tyr
275 280 285

Tyr Glu Leu Ile Glu Ser Glu Glu Leu Asp Arg Ile Leu Asp Glu Gly
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23